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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 14

Application Number: 09/522,296
Filing Date: March 09, 2000
Appellant(s): KUSUMOTO ET AL.

LINIAK, BERENATO, LONGACRE & WHOTE
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/09/2002.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: Regarding Issue No. 3 identified by the appellant: The issue is whether claims 1, 13, 20 and 21 are patentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Minabe '394. Although the final rejection, mailed 04/17/2002, inadvertently fails to address claim 21 in the opening line of the rejection of these claims, the body of the rejection clearly and unambiguously refers to claim 21 as being rejected.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1, 6, 10, 11, 12, 13, 14, 15, 16, 18, 20 and 21 stand and fall together; that claims 2, 3, 4 and 5 do stand and fall together; that claims 7, 8 and 9 stand and fall together; that claim 19 is separately patentable; that claims 28 and 29 stand and fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

3,819,181	MILLS	06-1974
4,438,931	MOTOMIYA	03-1984
5,961,394	MINABE	10-1999
5,556,097	ENDO	09-1996
5,573,723	TAKE	11-1996
6,033,318	DRAJAN	03-2000
5,042,806	HELMSTETTER	08-1991
2,230,459	MOCKRIDGE	10-1990

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 STAND 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mockridge (GB 2230459) in view of Take, Helmstetter and Drajan. Mockridge differs from the claimed invention in that Mockridge does not show a shaft-securing portion homogeneously formed as part of the outer shell structure. The teaching references to Take, Helmstetter and Drajan each show it to be old in the art to fabricate the shaft securing portion, i.e., the hosel, as part of the shell structure to form a unitary part. For example, note shaft support portions (73, 75) in Take. For instance, Helmstetter notes that the tube (36) is made part of the heel portion of the club head in order to receive the lower portion of the shaft. Helmstetter notes additional advantages in having the tube (36) formed as part of the shell structure including the ability of the clubmaker to provide greater uniformity in club head shape due to reduced warpage during the molding process resulting from the lack of a separate and outwardly present hosel structure. In addition, the extension of the shaft securing means from the top to the bottom of the cast head enables a clubmaker to maximize "heel feel"; thus, making the cast club head display attributes comparable to those found in high quality persimmon woods. See col. 3, line 50 through col. 4, line 3 along with col. 5, line 57 through col. 6, line 14 in Helmstetter. Finally, Drajan clearly portrays the shaft support arrangement (28) as being integrally formed with the shell (10) adjacent the heel (18). See Figure 1 in Drajan. In view of the patents to Take, Helmstetter and Drajan, it would have been obvious to modify the device in the cited art reference to Mockridge by casting the shaft securing portion homogeneously with the remaining shell portion from a top portion to a bottom portion of the shell, the motivation

being to simply provide the added benefits enhanced rigidity throughout the shaft securing means. Moreover, the selection by the clubmaker to assemble the shell in Mockridge through either the mating of diverse parts or through the casting of a single piece would have been obvious at the time the invention was made, as it has been held to be within the level of one of ordinary skill in the art to make integral that which has been heretofore been made in separate parts. With respect to the remaining limitations in the claims and with respect to the Mockridge patent, note that the club head includes a top (14), a sole (18), and heel and toe portions (Figure 2). In addition, said shaft securing portion is noted as socket (19) and extends between the top and sole portions (Figure 1).

As to claim 6, a shaft securing hole or bore (20) penetrates the socket (19) from the top to the sole.

As to claim 7, the shaft-securing hole includes a bottom (Figure 1).

As to claim 8, the bottom of the shaft securing hole and the sole lie in the same plane.

As to claim 9, the bottom portion of the shaft securing hole and the sole have substantially the same thickness.

As to claim 10, see page 1, lines 20-22, wherein Mockridge notes that the socket (19) may be cast integrally with the head.

As to claim 11, the shaft-securing portion (bore (20)) is clearly dimensioned to accept a cylindrical lower shaft portion (21).

As to claim 12, Figure 2 shows that at least a clearance of from 1 mm to 10 mm exists between the heel portion and the shaft securing element (19), particularly closer to the sole; thus, forming a hollow portion.

As to claim 14, Figure 2 shows that the hollow portion is wider in width nearer the sole than at the top.

As to claim 15, as the sole and heel are distinct portions of the head, it is clear that an edge is formed between the sole and the heel wall.

As to claim 18, Figures 1 and 2 clearly show a hosel portion formed at the top by projecting the shaft-securing portion from the top portion.

As to claim 29, the top portion of the club head body is provided with an aperture (joining hole) to accommodate the shaft-receiving element (19).

Claims 1, 2, 3, 5 and 16 STAND rejected under 35 U.S.C. 103(a) as being unpatentable over Endo ('097) in view of Take, Helmstetter and Drajan. Endo differs from the claimed invention in that Endo does not show a shaft-securing portion homogeneously formed as part of the outer shell structure. The teaching references to Take, Helmstetter and Drajan each show it to be old in the art to fabricate the shaft securing portion, i.e., the hosel, as part of the shell structure to form a unitary part. For example, note shaft support portions (73, 75) in Take. For instance, Helmstetter notes that the tube (36) is made part of the heel portion of the club head in order to receive the lower portion of the shaft. Helmstetter notes additional advantages in having the tube (36) formed as part of the shell structure including the ability of the clubmaker to provide greater uniformity in club head shape due to reduced warpage during the

molding process resulting from the lack of a separate and outwardly present hosel structure. In addition, the extension of the shaft securing means from the top to the bottom of the cast head enables a clubmaker to maximize "heel feel"; thus, making the cast club head display attributes comparable to those found in high quality persimmon woods. See col. 3, line 50 through col. 4, line 3 along with col. 5, line 57 through col. 6, line 14 in Helmstetter. Finally, Drajan clearly portrays the shaft support arrangement (28) as being integrally formed with the shell (10) adjacent the heel (18). See Figure 1 in Drajan. In view of the patents to Take, Helmstetter and Drajan, it would have been obvious to modify the device in the cited art reference to Endo by casting the shaft securing portion homogeneously with the remaining shell portion from a top portion to a bottom portion of the shell, the motivation being to simply provide the added benefits enhanced rigidity throughout the shaft securing means. Moreover, the selection by the clubmaker to assemble the shell in Endo through either the mating of diverse parts or through the casting of a single piece would have been obvious at the time the invention was made, as it has been held to be within the level of one of ordinary skill in the art to make integral that which has been heretofore been made in separate parts. With respect to the remaining limitations in the claim 1 and with respect to the Endo patent, see Figure 6, wherein Endo shows a club head having a top (54), sole (56), toe portion (58) and heel portion (57). A shaft-securing portion (62) extends from the top to the sole. Endo discloses a hollow metal shell (col. 4, lines 1-13). Figure 6 shows a first hollow portion between the shaft securing portion (62) and the heel portion (57)

As to claim 2, see Figure 7 and col. 4, lines 31-40, wherein Endo details that the face portion (53) is fixed to the main body (52).

As to claim 3, the hidden lines depicting the extension of shaft securing portion (62) indicate that the shaft securing portion is also spaced from the front striking face (53); thus, forming a hollow portion between the shaft securing portion and the face portion.

As to claim 5, see col. 3, lines 1-10, wherein Endo clearly discloses press working.

As to claim 16, Figure 6 indicates that the inside portion of the toe is higher than the inside portion of the heel in a cross-section passing through the axis of the shaft securing hole and along the face portion.

Claims 1, 13, 20 and 21 STAND rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge (GB 2,230,459) in view of Take, Helmstetter, Drajan and Minabe. Mockridge in view of Take, Helmstetter and Drajan has been discussed above. Mockridge, as modified, differs from the claimed invention in that Mockridge does not disclose the claimed wall thickness that is required by claim 13 nor the particular materials defined in claims 20 and 21. Minabe teaches a wall thickness of 1.2 mm (col. 3, lines 29-31) to reduce the weight of the head. Minabe further outlines that a pipe-guiding groove (34), which is deemed to serve as a support portion, attaches the shaft-securing portion (24c) to the heel portion. Still further, Minabe makes reference to β-type materials for both the face and the head, although notes that other titanium alloys may be used (col. 3, lines 25-38). These materials provide the required rigidity for the

club head. In view of the patent to Minabe, it would have been obvious to modify the Mockridge device to include these claimed features, the motivation being to make the club head both lighter in weight and rigid and to more securely retain the shaft securing shaft portion.

Claims 2 and 4 STAND rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge (GB 2,230,459) in view of Take, Helmstetter, Drajan and Motomiya. Mockridge in view of Take, Helmstetter and Drajan has been discussed above. Mockridge, as modified, differs from the claimed invention in that Mockridge uses a casting method to form the club head. Motomiya acknowledges that club heads formed by the lost wax process, e.g., cast club heads, often suffer from pinholes and cracks (col. 1, lines 16-21), noting that forged pieces substantially eliminate said pinholes and cracks (col. 1, lines 36-40). Further, Motomiya shows the commonness of fashioning the head from plural forged elements, with the face making up a distinct part and mated to the remainder of the shell to form a hollow structure (col. 3, lines 3-6 and Figure 3). The incorporation of press forging to generate separate club head parts is deemed to be advantageous by Motomiya from a manufacturing point of view (col. 4, lines 19-25). In view of the patent to Motomiya, it would have been obvious to modify the device in the cited art reference to Mockridge by substituting a forging process for the casting procedure disclosed by Mockridge, the motivation being to produce a high quality club head that is substantially free of defects such as cracks and pinholes. Further and in view of the teachings in Motomiya, it would have been obvious to provide a separate face united to a club head body as opposed to fashioning a unitary cast body, the

motivation being to make it desirable to mass produce the club heads, i.e., make the club heads use a less expensive process.

Claim 19 STANDS rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge (GB 2,230,459) in view of Take, Helmstetter, Drajan and Mills. Mockridge in view of Take, Helmstetter and Drajan has been discussed above. To have further modified the Mockridge device such that the shaft securing portion does not protrude above the top portion to provide an even, finished appearance would have been obvious in view of the patent to Mills which shows it to be old in the art to provide a shaft securing element (Figures 4, 5) that remains confined within the head. Note that Mills details that the club head construction he details is not limited to clubs formed exclusively formed of wood material.

Claim 17 STANDS objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(11) Response to Argument

In the arguments received 10/09/2002, the appellant contends that the combination of reference used in the rejections fail to render obvious a resulting club head having a hollow outer shell including a sole portion along with a shaft securing portion extended from the top portion to the sole portion and formed homogeneously with the outer shell to provide a one-piece, unitary, homogeneous body. Appellant's reference to specific teachings in the prior art used in the rejections in support of his

arguments are incorporated herein by reference and will not be repeated here, for brevity.

In response to these arguments, it is noted that appellant's argument that none of the prior art references to Take, Helmstetter and Drajan disclose a shaft securing portion formed adjacent to the heel wall and extended from the top portion to the sole portion is not deemed persuasive. The primary reference to Mockridge already teaches a shaft securing portion that extends from the top to the sole portion. The very essence of the §103 combination is to set forth a motivation for supplying the Mockridge device with the diverse feature of a shaft securing portion that is formed "homogeneously with the shell structure". The fact that the teaching references do not show a shaft securing portion extending from the top to the sole is irrelevant. Instead, the teaching references teach eaxactly what is missing in Mockridge, i.e., a shaft securing portion formed homogeneously with the shell structure. Notwithstanding the guidance provided to the skilled artisan by the teaching references to Take, Helmstetter and Drajan, it would nonetheless have been obvious to the skilled artisan to make use of a homogeneous, unitary construction of the Mockridge device, since the patent laws have long established that it would have been obvious for the skilled artisan to make unitary that which was once made separately. See In re Larson, 144 USPQ 347 (CCPA 1965).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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